

# Audit



# Report

OFFICE OF THE INSPECTOR GENERAL

QUICK-REACTION REPORT ON WASTEWATER  
TESTING AT THE MARINE CORPS COMBAT  
DEVELOPMENT COMMAND, QUANTICO, VIRGINIA

Report No. 96-065

February 2, 1996

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**Department of Defense**

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February 2, 1996

**MEMORANDUM FOR ASSISTANT SECRETARY OF THE NAVY (FINANCIAL  
MANAGEMENT AND COMPTROLLER)**

**SUBJECT: Quick-Reaction Report on Wastewater Testing at the Marine Corps  
Combat Development Command, Quantico, Virginia  
(Report No. 96-065)**

We are providing this audit report for review and comment. We are issuing this report to prevent the unneeded inclusion of requirements for laboratory testing of wastewater on a pending contract for laboratory support services. This report is one in a series of reports on contracted laboratory support services for environmental testing.

DoD Directive 7650.3 requires that all audit recommendations and potential monetary benefits be resolved promptly. The Commanding General, Marine Corps Combat Development Command, Quantico, did not comment on a draft of this report. Therefore, we request comments on the final report by February 26, 1996.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Joseph P. Doyle, Audit Program Director, at (703) 604-9348 (DSN 664-9348) or Mr. John Yonaitis, Audit Project Manager, at (703) 604-9231 (DSN 664-9231). See Appendix D for the report distribution. The audit team members are listed inside the back cover.

*David Steensma*

David K. Steensma  
Deputy Assistant Inspector General  
for Auditing

## Office of the Inspector General, DoD

Report No. 96-065  
(Project No. 5CK-0053.01)

February 2, 1996

### Quick-Reaction Report on Wastewater Testing at the Marine Corps Combat Development Command, Quantico, Virginia

#### Executive Summary

**Introduction.** The Marine Corps Combat Development Command (the Command), Quantico, Virginia, contracted with Universal Laboratories, Hampton, Virginia, for laboratory testing of wastewater at two wastewater treatment plants. The Command prepared a solicitation to procure contracted laboratory services that would provide similar levels of effort over the next 5 years. We are issuing this quick-reaction report to prevent the unneeded inclusion of requirements for laboratory testing of wastewater on a pending contract for laboratory support services. This report is one in a series of reports on contracted laboratory support services for environmental testing.

**Audit Objectives.** The overall audit objective was to evaluate the cost and operational effectiveness of laboratory support services provided for environmental testing. Specifically, we determined which of the following was more cost-effective for the Command: to perform wastewater testing at the Mainside wastewater treatment plant laboratory or to have the testing done by contract. The management control program review applicable to the overall audit objective will be discussed as part of a subsequent report.

**Audit Results.** The Command did not plan for or use the most cost-effective method for testing wastewater. As a result, the Command could spend about \$310,000 in unnecessary costs for the testing of wastewater over the next 5 years. See Part I for a discussion of the audit results and Appendix B for a summary of the potential benefits resulting from the audit.

**Summary of Recommendations.** We recommend that the Command perform all environmental testing of wastewater at its in-house laboratory and remove the requirement to test wastewater from the current solicitation for contracted laboratory testing.

**Management Comments.** The Commanding General, Marine Corps Combat Development Command, Quantico, did not comment on a draft of this report. We request comments on this final report by February 26, 1996.

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## **Part I - Audit Results**

### Audit Background

The Marine Corps Combat Development Command (the Command), Quantico, Virginia, operates two wastewater treatment plants, Mainside and Camp Upshur. The Command is required to comply with the provisions of the Clean Water Act of 1977, as amended, and the Virginia State Water Control Laws and Regulations for monitoring, reporting, sampling, and testing of discharges from their wastewater treatment plants. Discharge is the liquid waste that is emitted from the wastewater treatment plant.

**Monitoring and Reporting.** Under the Clean Water Act, section 308, the Command, as the owner and operator of a wastewater discharge source, is required to:

- o Monitor pollution prevention programs by inspecting facilities and reviewing records, and
- o Report wastewater discharges, showing that average daily wastewater discharges are within acceptable Clean Water Act limitations.

Monitoring and reporting are accomplished through the daily testing of wastewater samples.

**Sampling and Testing.** The Command uses Government employees to draw the required discharge samples from the two wastewater treatment plants, to package the samples, and to send the samples for testing and analysis to Universal Laboratories, Hampton, Virginia. In FY 1995, the Command contracted with Universal Laboratories, contract M00264-95D-0003, to test samples extracted from the wastewater treatment plant.

The contract expires January 31, 1996. However, the Command prepared a solicitation, M00264-95R-0007, for continuation of contracted laboratory testing for an initial base year of February 1, 1996, through January 31, 1997, and 4 option years at the same level of effort as the existing contract.

## Audit Objectives

The overall audit objective was to evaluate the cost and operational effectiveness of laboratory support services provided for environmental testing. Specifically, we determined which of the following was more cost-effective for the Command: to perform wastewater testing at the Mainside wastewater treatment plant laboratory or to obtain the services of a contracted laboratory. We also reviewed the Command management control program as it applied to the specific audit objective. We will discuss the review of the Command management control program in the overall report on laboratory support services for environmental testing. See Appendix A for our audit scope and methodology and information on prior coverage related to the specific audit objectives.



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## **Use of In-House Laboratory for Environmental Testing of Wastewater**

The Marine Corps Combat Development Command (the Command), Quantico, Virginia, did not plan for or use the most cost-effective method for testing wastewater. That condition occurred because the Command did not fully use its in-house laboratory at the Mainside wastewater treatment plant for testing wastewater, nor did the Command plan to use its in-house laboratory in the future. As a result, the Command could spend about \$310,000 in unnecessary costs for the testing of wastewater.

### **Method of Testing Wastewater**

The Command did not plan for or use the most cost-effective method for testing wastewater. The Command contracted with a commercial laboratory in FY 1995 to test the wastewater and planned to continue contracting for wastewater testing. The cost of using the existing laboratory at the Mainside wastewater treatment plant would have been significantly less than the cost of using contracted laboratories.

The Command spent about \$75,000 for contract M00264-95D-0003 for the testing of discharges from the wastewater treatment plants. The Command plans to continue contracting for the testing of wastewater discharges, rather than using the laboratory at the Mainside wastewater treatment plant. In November 1995, solicitation M00264-95R-0007 was sent to prospective contractor laboratories for price quotes for the same testing services at the same future levels of effort as the existing contract. The contract is scheduled to have a basic performance year of February 1, 1996, through January 31, 1997, and 4 option years. We estimate that the Command could spend \$375,000 on the contract in the next 5 years.

### **In-House Government Laboratory**

The Command did not fully use the laboratory at the Mainside wastewater treatment plant for testing wastewater, nor did the Command plan to use the laboratory in the future. The laboratory at the Mainside wastewater treatment plant does not need to be certified to perform the required wastewater testing. In FY 1994, the Command upgraded the laboratory equipment and facilities necessary to perform the wastewater tests, but did not provide the chemicals needed to perform the tests. The laboratory did not have the number of

## Use of In-House Laboratory for Environmental Testing of Wastewater

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qualified personnel needed to effectively perform uninterrupted wastewater testing. The Command should perform all required testing for wastewater at the Mainside wastewater treatment plant laboratory.

The following are ways in which the Command could accomplish the testing.

**Laboratory Certification.** The laboratory at the Mainside wastewater treatment plant is permitted to perform the required wastewater tests. According to the Department of Environmental Quality, State of Virginia, laboratories within the state, similar to the laboratory at the Mainside wastewater treatment plant, do not have to be certified by the State or Federal Government to perform wastewater testing. The laboratories need only comply with State testing and reporting requirements and maintain wastewater discharges within the required Clean Water Act limitations.

**Laboratory Equipment, Facilities, and Chemicals.** The laboratory at the Mainside wastewater treatment plant had the equipment and facilities needed to perform the wastewater tests; however, the laboratory did not have the chemicals needed to perform the tests. The Command spent about \$70,000 during FY 1994 to improve laboratory equipment and facilities. However, Command management did not provide the laboratory at the Mainside wastewater treatment plant with the chemicals required for testing wastewater. The manager at the Mainside wastewater treatment plant stated that the Command could have obtained the chemicals at an initial start-up cost of about \$25,000 and replenishment costs of about \$10,000 or less for each subsequent year.

**Personnel Resources.** According to the manager at the Mainside wastewater treatment plant, the Command could perform the required wastewater testing at the existing plant laboratory with three qualified personnel (two primary and one backup). However, only 2 of 22 wastewater treatment plant employees were qualified to perform the laboratory testing. Increasing the number of employees qualified to perform laboratory testing would ensure the full use of the laboratory. The additional qualified personnel could be obtained through limited training of existing personnel in basic testing procedures or through redesignating an existing billet as a Physical Science Technician. Also, future requirements for performing wastewater testing could be incorporated into the duties of laboratory personnel to ensure uninterrupted wastewater testing.

## Laboratory Costs

During FY 1995, the Command spent about \$75,000 for a contract with Universal Laboratories for wastewater testing. We estimate that the planned contract would cost the Command about \$375,000 over the next 5 years for wastewater testing. Chemicals for the Mainside wastewater treatment plant laboratory are estimated to cost about \$65,000 (\$25,000 for the initial cost and \$10,000 for each subsequent year) over the next 5 years. Therefore, the

## **Use of In-House Laboratory for Environmental Testing of Wastewater**

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Command could more fully use the laboratory at the Mainside wastewater treatment plant and have monetary benefits of about \$310,000 (\$375,000 minus \$65,000) by using the laboratory at the Mainside wastewater treatment plant for wastewater testing.

### **Recommendations for Corrective Action**

We recommend that the Commanding General, Marine Corps Combat Development Command, Quantico:

1. Perform all required environmental testing for wastewater at the laboratory located at the Mainside wastewater treatment plant.
2. Remove the requirement for laboratory testing of wastewater from solicitation number M00264-95R-0007.

### **Management Comments**

The Commanding General, Marine Corps Combat Development Command, Quantico, did not respond to the draft of this report. We request comments on the final report by February 26, 1996.

## **Part II - Additional Information**

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## Appendix A. Scope and Methodology

### Scope

**Audit Scope.** For this segment of the audit, we reviewed the \$133,000 contract that the Command awarded to Universal Laboratories for laboratory testing of wastewater. The term of the contract was December 1994 through January 1996. We also reviewed the solicitation for continued contractor services, as well as the laboratory capabilities at the Mainside wastewater treatment plant, including equipment, chemicals, and personnel.

**Audit Period, Standards, and Locations.** We performed this segment of the program audit from October 2 through October 6, 1995, in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. We included tests of management controls considered necessary. Appendix C lists the organizations we visited or contacted.

### Methodology

**Contracts for Laboratory Support Services.** We reviewed the existing contract for laboratory testing of wastewater to determine the type, number, frequency, and cost of each test; the sampling methodology; and the required elapsed time for receipt of test reports. We also reviewed the solicitation for contractor quotes for continued contractual services to determine the similarity to the existing contract.

**Wastewater Treatment Plant Laboratory.** We reviewed the in-house wastewater treatment plant laboratory and the qualifications of its personnel to determine their capability to perform all of the testing required by the Clean Water Act and the State of Virginia environmental regulations for wastewater discharges.

**Use of Computer-Processed Data.** We did not rely on computer-processed data to determine the contractor or in-house laboratory capabilities and costs.

## **Summary of Prior Audits and Other Reviews**

No reports or reviews have been issued on the laboratory support services for environmental testing at the Command.

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## Appendix B. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount of Benefit
1. and 2.	Economy and Efficiency. Avoids using contract laboratory for testing that could be performed in-house.	Funds put to better use. Decreases Operation and Maintenance funds used for contracted laboratory support services for environmental testing by about \$310,000.

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## **Appendix C. Organizations Visited or Contacted**

### **Office of the Secretary of Defense**

Deputy Under Secretary of Defense for Environmental Security, Washington, DC

### **Department of the Navy**

Deputy Assistant Secretary of the Navy for Environment and Safety, Washington, DC  
Headquarters, Naval Facilities Engineering Command, Alexandria, VA

### **U.S. Marine Corps**

Headquarters, U.S. Marine Corps, Arlington, VA  
Marine Corps Combat Development Command, Quantico, VA

### **Non-Federal Government Organization**

State of Virginia, Department of Environmental Quality, Woodbridge, VA



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## **Appendix D. Report Distribution**

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Under Secretary of Defense for Acquisition and Technology  
Deputy Under Secretary of Defense (Environmental Security)  
Director, Defense Logistics Studies Information Exchange  
Under Secretary of Defense (Comptroller)  
Deputy Comptroller (Program/Budget)  
Assistant to the Secretary of Defense (Public Affairs)

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Auditor General, Department of the Army

### **Department of the Navy**

Assistant Secretary of the Navy (Financial Management and Comptroller)  
Auditor General, Department of the Navy  
Marine Corps Combat Development Command

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller)  
Auditor General, Department of the Air Force

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General Accounting Office

## **Non-Defense Federal Organizations and Individuals (cont'd)**

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- Senate Subcommittee on Defense, Committee on Appropriations
- Senate Committee on Armed Services
- Senate Committee on Governmental Affairs
- House Committee on Appropriations
- House Subcommittee on National Security, Committee on Appropriations
- House Committee on Government Reform and Oversight
- House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
- House Committee on National Security

## **Audit Team Members**

This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD.

Paul J. Granetto  
Joseph P. Doyle  
John Yonaitis  
Ellen P. Neff  
Charles R. Johnson

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